

SEPA ENVIRONMENTAL CHECKLIST

UPDATED 2014

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants: [\[help\]](#)

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals: [\[help\]](#)

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the [SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS \(part D\)](#). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. background [\[help\]](#)

1. Name of proposed project, if applicable: [\[help\]](#)

WDFW Chum Spawning Channel NF Lewis River

2. Name of applicant: [\[help\]](#)

Washington State Department of Fish and Wildlife (WDFW)

3. Address and phone number of applicant and contact person: [\[help\]](#)

*Washington State Fish and Wildlife
600 Capitol Way
Olympia, WA. 98501
Contact: Cindy Knudsen
(360) 902 8422*

4. Date checklist prepared: [\[help\]](#)

April 8, 2015

5. Agency requesting checklist: [\[help\]](#)

Washington State Fish and Wildlife (WDFW).

6. Proposed timing or schedule (including phasing, if applicable): [\[help\]](#)

Summer, 2015.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. [\[help\]](#)

No future additions or expansion of this project is expected. After construction, there will be a seasonal increase in WDFW vehicle traffic for monitoring activities.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. [\[help\]](#)

The spawning channel has geological, hydraulic, and groundwater monitoring data available to support the site location. The proposed project incorporates environmental data in the project design.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. [\[help\]](#)

The Washington State Fish and Wildlife Hatchery and Genetic Management Plan (HGMP) is in the final review stage. This channel will be operated in accordance with the HGMP recommendations that are expected to have positive restoration effects for chum salmon.

10. List any government approvals or permits that will be needed for your proposal, if known. [\[help\]](#)

An HPA, and a Corps permit will be required.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this

page. (Lead agencies may modify this form to include additional specific information on project description.) [\[help\]](#)

Chum salmon are a threatened species in the NF Lewis River. This proposal supports chum restoration and watershed restoration goals by providing new spawning habitat for chum, and installing large wood in the NF Lewis River and floodplain. Project components include: the spawning channel, an infiltration gallery and walkway, and weirs inside the constructed channel. Large woody material (LWM) will be placed in the mainstem of the NF Lewis River and in the floodplain.

The new spawning channel measures 1,400 feet long, fifteen feet at the deepest end, varying in width from 10 feet to 14 feet. Gravel specifically designed for spawning chum installed in the channel. Upwelling ground water with supplemental instream flow from the infiltration gallery is expected to provide preferred spawning habitat for chum. Large wood will provide floodplain relief in the NF Lewis River and Lower Columbia Region.

To supplement upwelling groundwater, a gravity fed infiltration gallery intake structure will be installed at the north end of the constructed channel. Surface water will be introduced from the Lewis River through underground pipes into the infiltration gallery. The underground pipe design includes 160 linear feet of buried 16 inch well screen intake pipe adjacent to the river leading into an underground 24 inch conveyance pipe, terminating into the chum channel. Other project elements include a cleanout riser, trash rack, reinforcing riprap, and three control weirs.

The channel will be protected from the NF Lewis River flood level or overbank flows by the installation of additional LWM in the floodplain at the upstream end of the channel to protect the spawning channel during high flow conditions, discourage the possibility of an avulsion into the spawning channel, and provide terrestrial habitat (Plans pgs. 10, 16

After construction mitigation includes planting disturbed riparian areas with native trees and shrubs to provide long-term riparian and habitat functions as specified in project drawings. (P. 17). Overstory and instream habitat at the project site will have a minimum of disruption or alteration beyond the extent required to undertake the proposed project. All disturbed exposed soils outside of the channel will be planted with an erosion control seed mix. Disturbed upland areas will be planted with native, upland coniferous tree species.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. [\[help\]](#)

From Interstate 5, take exit 21 toward WA-503 E/ Woodland /Cougar. Continue onto Pacific Avenue. Turn left to stay on Pacific Avenue. Turn Left onto Lewis River Road. Turn right onto E. CC Street. Continue onto Bridge 80. Continue onto NW Pacific Highway. NW Pacific Highway turns slightly left and becomes NW Hayes Road. Turn left onto NW 15th Ave. Destination is on your right. The project is in Unincorporated Clark County T5, R1E, S9 (45.936389,-122.685994). Please refer to project drawings for further details.

Abbreviated Legal Description: #10 SEC 9 T5N R1EWM 113.16A

B. ENVIRONMENTAL ELEMENTS [\[help\]](#)

1. Earth

- a. General description of the site [\[help\]](#)
(circle one): Flat, rolling, hilly, steep slopes, mountainous
other

The project is located in the Lewis River floodplain where it is generally flat. Mountainous areas are nearby.

- b. What is the steepest slope on the site (approximate percent slope)? [\[help\]](#)

The project site typically has a 0 to 1 % slope. Adjacent areas have slopes less than 15%.

- c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils. [\[help\]](#)

The site has predominantly Lewis River Alluvium (riverwash) with some cobbly soils present. These soils will be removed in the constructed channel and replaced with spawning gravel with the approximate proportions as indicated below:

Diameter of Gravel	cy
4 - 6 inch rock	2
2.5 - 4 in. rock	13
1 - 2.5 inch rock	35
3/4 to 1 in. rock	35
3/8 - 3/4 inch rock	10
No. 4-3/8 inch rock	5
No. 10 - No. 4 material	0

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. [\[help\]](#)

Lewis River Alluvium Riverwash is present at the project location. Riverwash soils are highly erodible soil.

- e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. [\[help\]](#)

BELOW OHW

Excavation: Infiltration Gallery Riverbank to subgrade: 54 cy

Excavation: Chum Channel Excavation to subgrade: 30 cy

Chum Channel Fill: Spawning gravel 29 cy

Chum Channel Fill: Native materials as fill behind log walls 1 cy

Infiltration Gallery Fill: Erosion control and scour protection riprap class A: 50 cy

16 inch PCV well screen pipe 160 LF

ABOVE OHW

Excavation: Chum channel: Excavation to subgrade: 8144 cy

Excavation: Infiltration Gallery: riverbank to subgrade: 902 cy
Chum Channel Fill: Drain rock entry pool (erosion control) Above OHW 26 cy
Chum Channel Fill: Spawning gravel above OHW 1176 cy (including entire length of channel)
Chum Channel Fill: Sheet pile above OHW 60 cy
Chum Channel Fill: Erosion Control weirs above OHW 21 cy
Chum Channel Fill: backfill behind log walls above OHW 1581 cy
Infiltration gallery Fill riprap class A scour protection Above OHW 24 cy
Infiltration Gallery Fill: Spawning gravel- drain rock 61 cy
Infiltration Gallery Fill: backfill around native materials 598 cy

*This project will consist of a graded area approximately 1,400 feet long and between 12 – 14 feet wide.
All materials (except as noted as native materials above) will come from a local quarry.*

*Total net cut chum channel: Net Cut (8,174) / Fill (1,581);
Total Net Cut Infiltration Gallery: Net Cut (956) / Fill (598).
Flow Supplementation System net cut: -219 cy*

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

[\[help\]](#)

Yes erosion could occur as a result of project ground breaking and excavation activities.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? [\[help\]](#)

The sheet pile will add less than 100 square feet of impervious surfaces above OHW after construction.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: [\[help\]](#)

Construction work will be entirely isolated from the NF Lewis River. All work, including earthwork will be completed as quickly as possible and operate to minimize disturbance. All excavation will be performed in isolation from live water using cofferdams. The majority of the channel will be excavated before the ends are excavated and the channel is connected to the river.

Excavated materials will be placed in an upland location completely isolated from the river. Disturbed soils will be stabilized and protected from erosion by mulching, plastic sheeting, sodding, hydro-seeding, erosion control fabrics according to the stormwater plan or other approved measures. Soil compaction will be minimized to the greatest extent possible.

Temporary material stockpiling will be located on site more than 150 feet away from the river or adjacent wetland. Stockpiled materials will also be covered with plastic to prevent erosion. Any toxicants (creosote, oil, cement, concrete, and equipment wash water) construction debris, overburden, and other waste materials will be disposed of at an approved facility. Temporary fill materials will not be stockpiled in areas where it could affect sensitive areas or change drainage patterns.

Only materials meeting project specifications will be placed in the spawning channel. The completed project will not introduce any chemical or material pollution to any water source or wetland. No foreign materials will enter any waterway or wetland. Spill kits will be on site should an accidental spill occur. Water quality will be monitored as approved by permitting agencies. After construction activities are completed water will be reintroduced slowly to the new channel.

Rewatering

After construction water quality in the NF Lewis River could be temporarily affected after the coffer dams have been removed. Turbidity could temporarily increase when water from the spawning channel enters the river for

the first time. To avoid the introduction of sediment to the NF Lewis River, rewatering the coffered area will be done in a slow measured manner to prevent a sudden downstream release of sediment laden water. The downstream end of the coffer dam will be removed first followed by partial removal of the upstream end. One quarter to one third of the flow will be introduced into the dewatered area and allowed to settle. Once flows are no longer subsurface, partial removal of the coffer dam will continue in stages that release an additional one quarter of one third of the flow until the barrier is completely removed. The complete rewatering process will occur in one day between sunrise and sunset to ensure adequate light for the safe and efficient inspection of the block nets around the coffer dam, and removal of any entrained fish.

Best Management Practices (BMP) will be implemented to minimize foreign material or erosion introduced from storm water or construction waste materials from entering any aquatic area, water source, or wetland. Water quality testing will be performed according to permit regulations. Water quality standards will be met before water reaches the NF Lewis River as required by regulatory agencies. If high flow conditions inundate the project area or construction activities increase turbidity affecting water quality, construction operations will cease and the cause of exceedance will be recorded. Construction will not continue until corrective actions have been implemented or flood flow conditions cease. Water quality will be monitored as required by permit regulations.

When vegetation is removed it will be cut off at ground level, not grubbed. Clearing limits will be clearly marked and soil disturbance, tree removal, and trimming and removal will be kept to a minimum. Dust abatement measures may be used as approved by permitting agencies if necessary considering the soil type, equipment usage, prevailing wind direction, and the effects caused by other erosion or sediment control measures. Petroleum based products will not be used for dust abatement.

Buffers will be placed around wetlands and sensitive riparian habitats. Excavated materials will be staged uplands in a fill area as designated in the permit drawings and conducted as specified in the storm water pollution prevention plan to prevent erosion.

Any groundwater seepage into the construction area will be pumped to an upland location, filtered, and then treated by allowing the water to infiltrate over undisturbed ground. Water quality will be monitored according to permit requirements.

Approximately 2,000 lf of existing unpaved access roads and paths will be used for construction with approximately 1,700 lf decommissioned at project completion. The remaining 300 lf will remain for future monitoring and management activities. There will be no paved surfaces created as a result of this project. At project completion restoration plantings will be done to minimize erosion, stabilize banks, access roadways and to prevent effects from erosion from impacting the spawning channel or the NF Lewis River.

2. Air

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known. [\[help\]](#)

Typical emissions will be generated from construction equipment. No source of emissions will be generated from the completed project.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. [\[help\]](#)

No off site sources of emissions or odors are expected to affect this proposal.

- c. Proposed measures to reduce or control emissions or other impacts to air, if any: [\[help\]](#)

None are proposed.

3. Water

a. Surface Water: [\[help\]](#)

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. [\[help\]](#)

The (NF) Lewis River is at the project location. The Lewis River flows into the Columbia River. There are freshwater forested wetlands at the project location.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans. [\[help\]](#)

The proposed project will work adjacent to the Lewis River. This project creates a side channel to the Lewis River, constructed specifically for spawning chum. Please refer to attached plans.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. [\[help\]](#)

Eighty (80) cubic yards of fill will be placed below the OHW mark of the Lewis River (see question B.1.e.). Eighty four (84) cubic yards of native material will be cut from below OHW resulting in a net cut of 4 cubic yards in the Lewis River below OHW. All fill materials will come from a local quarry.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. [\[help\]](#)

Additional water, up to 5 cubic feet per second (cfs) can be supplied to the spawning channel via a gravity-fed infiltration gallery comprised of 160 lf of 16 inch diameter slotted well screen pipe (Plans pgs. 14-15). This structure will be buried in the bank of the NF Lewis River main-channel below the ordinary summer water surface elevation and be protected from scouring river flows by riprap and an engineered log structure (Plans, pg. 14). Approximately 160 lf of 24" pipe will be installed to convey the collected water to the head end of the spawning channel. Riprap will be installed around the outlet of the conveyance pipe to dissipate energy, minimize scour, and minimize turbidity. Instream flow varies seasonally.

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. [\[help\]](#)

Yes, the entire site is within in the 100 year floodplain.

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. [\[help\]](#)

No discharges are anticipated from the proposed project during construction or at project completion.

b. Ground Water:

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. [\[help\]](#)

Groundwater will not be withdrawn from a well. No water will be discharged to groundwater.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. [\[help\]](#)

No waste materials will be discharged to the ground from septic tanks or any other source as a result of this project.

c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. [\[help\]](#)

Stormwater will infiltrate through natural ground surfaces, before eventually returning to the Lewis River.

- 2) Could waste materials enter ground or surface waters? If so, generally describe. [\[help\]](#)

Best Management Practices (BMPs) are used to prevent any source of waste materials from entering surface water. Fueling of machines will be done away from any source of surface water. Spill kits will be available on site. No source of waste material will come from the completed project.

- 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

Upwelling ground water will combine with surface water flow in the new channel that will be returned to the Lewis River. No changes are anticipated that could affect drainage patterns in the Lewis River.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

Most construction activities will be uplands in dry conditions away from the Lewis River. Cofferdams lined with plastic will be placed at either end of the project to isolate the construction area away from the Lewis River. Existing berms at either end of the channel will not be removed until necessary. Any water in the construction area will be isolated from the Lewis River until project completion by pumping it to an upland location where it will be treated, then infiltrated over undisturbed ground before eventually reentering the Lewis River.

Rewatering the coffered area will be done in a slow measured manner to prevent the sudden downstream release of sediment laden water. The downstream end of the coffer dam will be removed first followed by partial removal of the upstream end to release one quarter to one third of the flow into the dewatered area. Once flows are no longer subsurface, partial removal of the coffer dam will continue in stages that release an additional one

quarter of one third of the flow until the barrier is completely removed. As during barrier construction, the beach seine functioning as a block net around the coffer dams will be inspected to ensure it remains securely in place. The seine will be inspected for impinged or dead fish throughout the rewatering process. Once the cofferdam is completely removed the block net will be removed. The complete rewatering process will occur in one day between sunrise and sunset to ensure adequate light for the safe and efficient inspection of the block nets and removal of any entrained fish.

4. Plants [\[help\]](#)

a. Check the types of vegetation found on the site: [\[help\]](#)

- ☒ deciduous tree: alder, maple, aspen, other
- ☒ evergreen tree: fir, cedar, pine, other
- ☒ shrubs
- ☒ grass
- ☐ pasture
- ☐ crop or grain
- ☐ Orchards, vineyards or other permanent crops.
- ☒ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- ☐ water plants: water lily, eelgrass, milfoil, other
- ☐ other types of vegetation

b. What kind and amount of vegetation will be removed or altered? [\[help\]](#)

Up to 15 trees may be removed. If any other vegetation is removed it will be cut off at ground level and not grubbed. Restoration plantings will be done at project conclusion. Refer to page 17 of the project drawings for detailed planting plan.

c. List threatened and endangered species known to be on or near the site. [\[help\]](#)

*Two species occur in Clark County: *Lomatium bradshawii*, and *Howellia aquatilis*. These plant species have not been observed at the project site.*

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: [\[help\]](#)

Two revegetation areas will restore the area, one at the erosion control seeding area and one area where shrub and small tree plantings will be done. Tree replanting will be done at a 28:1 ratio. LWM will be placed in the mainstem of the NF Lewis River and floodplain. Invasive Himalayan blackberry and Japanese knotweed will be removed from the site. The area will be replanted with 210 each Black Cottonwood and Oregon Ash of minimum 24 inch size (Plans pg. 17). Replanting activities will take place following the construction conclusion. Please refer to project drawings for additional details.

e. List all noxious weeds and invasive species known to be on or near the site.

No noxious weeds or invasive species are known at the site.

5. Animals

- a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include: [\[help\]](#)

birds: hawk, heron, eagle, songbirds, other:

mammals: deer, bear, elk, beaver, other:

fish: bass, salmon, trout, herring, shellfish, other _____

- b. List any threatened and endangered species known to be on or near the site. [\[help\]](#)

Fall Chum Salmon

Lewis Spring Chinook LCR salmon: Threatened

Lewis Tule Fall LCR Chinook: Threatened

Lewis Early Bright Fall LCR Chinook: Threatened

Lewis LCR Coho: Threatened

North Fork LCR Lewis Winter Steelhead: Threatened

North Fork LCR Lewis Summer Steelhead: Threatened

Bull trout LCR Basin IRU Threatened

- c. Is the site part of a migration route? If so, explain. [\[help\]](#)

Salmon, steelhead, and bull trout and other native species migrate through the Lewis River adjacent to the proposed project site.

- d. Proposed measures to preserve or enhance wildlife, if any: [\[help\]](#)

This project is specifically designed to support spawning chum salmon. The new channel may also provide habitat for other species during spawning and rearing activities. The project will be conducted in daylight hours within WDFW management plans and approved work windows, within regulatory permit guidelines. The project will be done when the least amount of rearing or migrating species are present.

Before construction activities start the following fish removal procedures will be followed to protect fish that could be present in the NF Lewis River:

Fish removal operations are only conducted by or under the direct supervision of a fishery biologist. Before in water work starts, a sein net will be slowly moved across the edge of the wetted perimeter of the reach to be isolated, toward the center of the river channel at a slow measured pace to encourage the downstream movement of fish, reduce the risk of stranding, and to volitionally move fish out. Fish seining will continue in the wetted portions within the area being dewatered to flush fish out volitionally downstream and out of the area, until the water level and water flow with the area being dewatered is too low for effective seining. Adequate numbers of personnel trained and experienced in seining fish and in fish removal practices will be present during fish removal activities.

The sein will be comprised of soft (non-abrasive) nylon material typically 9.5 millimeters (0.37 inches) and of a sufficient length to extend from the shoreline at each end of the net out to mid-channel and beyond the extent where a supersack barrier will be placed. The net will have a weighted bottom line, and it will stay in place during construction as a block net. The net will be inspected for impinged or dead fish frequently during construction and visual observation of the isolated area will be conducted (at least every 4 hours) to monitor for fish presence.

Coffer dams, constructed of bulk bags and lined with plastic sheeting, will be installed with an excavator staged above OHW to isolate construction activities from live water. If necessary, plastic sheeting will be installed over

the top of sandbags for an improved seal. If required, silt curtains will be placed in the river to trap sediment and ensure that no turbid waters leave the site. The block net will then be pulled net close to the coffer dam, where it will remain in place during construction and during coffer dam removal.

De-watering the areas behind the coffer dams will be done slowly during daylight hours between sunrise and sunset when there is sufficient light to safely inspect the dewatered areas for fish that may have become stranded in isolated pools. The pumps used to divert water uplands areas for treatment before returning it to the river will be screened to prevent impingement of fish.

Any fish or other vertebrates inside the isolated area will be transferred to live water with soft aquarium dip nets as soon as they are captured. Fish removal and monitoring activities will be recorded for a post-project report. When the area is sufficiently de-watered, and fish have been removed from the isolated area, excavation will begin.

All Best Management Practices will be used during construction to prevent sources of siltation, chemical contamination, upon reaching subgrade; operators will place the slotted pipe and connect to the already installed conveyance pipe. A function test will be performed and then backfilling will commence, first with drain rock, then armor, and finally the installation of the engineered LWM structure. The contractor will work below OHW only as the work requires.

e. List any invasive animal species known to be on or near the site.

No invasive animal species are known to be on or near the proposed project site. Waders, boots and any other gear used will be inspected to avoid transferring aquatic invasive species. Felt sole boots will not be used to prevent the spread of invasive species.

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc. [\[help\]](#)

No source of energy will be used by the completed project.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. [\[help\]](#)

This project will not affect any potential use of solar energy by adjacent properties.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: [\[help\]](#)

No energy conservation features are included in the plans for this proposal.

7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe. [\[help\]](#)

1) Describe any known or possible contamination at the site from present or past uses.

No known sources of contamination at the site from past or present uses are known.

- 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

No known sources of existing toxic or hazardous chemicals will affect project development or design.

- 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

No known sources of existing toxic or hazardous chemicals will be stored, used or produced during the projects development or construction or at any time during the operating life of the project.

- 4) Describe special emergency services that might be required.

No emergency services are anticipated.

- 5) Proposed measures to reduce or control environmental health hazards, if any:

During construction a spill kit will be available on site if there is any fuel or other hazardous types of spills. No other measures are proposed to reduce or control environmental health hazards.

b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? [\[help\]](#)

No sources of noise are typically present at this natural site.

- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site. [\[help\]](#)

No types of noise are anticipated from the completed project.

- 3) Proposed measures to reduce or control noise impacts, if any: [\[help\]](#)

No measures are proposed to control noise.

8. Land and shoreline use

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. [\[help\]](#)

The proposed project is located on an undeveloped property adjacent to the Lewis River. Nearby areas are rural residential and there are some nearby agricultural areas. This project is not expected to affect nearby or adjacent properties.

- b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use? [\[help\]](#)

This project site has not been used as a working farmland or working forest land. No future property conversion is anticipated.

- 1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

- c. Describe any structures on the site. [\[help\]](#)

There are no structures on this site.

- d. Will any structures be demolished? If so, what? [\[help\]](#)

No structures will be demolished on this site.

- e. What is the current zoning classification of the site? [\[help\]](#)

FR-40 Forest and Agricultural Districts

- f. What is the current comprehensive plan designation of the site? [\[help\]](#)

R-5, Single family residential districts

FR-2

Water

- g. If applicable, what is the current shoreline master program designation of the site? [\[help\]](#)

Aquatic, Natural, Rural Conservancy, Residential.

- h. Has any part of the site been classified as a critical area by the city or county? If so, specify. [\[help\]](#)

The project is a category 2 critical recharge area. This site has critical habitat classification for salmon species, and bull trout. The area is within a severe erosion hazard area.

- i. Approximately how many people would reside or work in the completed project? [\[help\]](#)

No persons would reside at this site, WDFW employees will work at this site, seasonally.

- j. Approximately how many people would the completed project displace? [\[help\]](#)

No persons will be displaced as a result of this project.

- k. Proposed measures to avoid or reduce displacement impacts, if any: [\[help\]](#)

No measures are proposed to reduce displacement impacts.

- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: [\[help\]](#)

This proposal supports watershed restoration plans by providing new spawning habitat for chum, a threatened species in the Lewis River. Large wood placed in the floodplain will provide some floodplain relief. This project supports watershed restoration goals in the Lewis River Watershed and the Lower Columbia Region.

- m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

No additional measures have been taken to ensure that this project is compatible with nearby agricultural and forest lands.

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. [\[help\]](#)

No housing units will be provided.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. [\[help\]](#)

No housing units will be eliminated.

- c. Proposed measures to reduce or control housing impacts, if any: [\[help\]](#)

No measures are proposed to control housing impacts.

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? [\[help\]](#)

- b. What views in the immediate vicinity would be altered or obstructed? [\[help\]](#)

No views will be altered or obstructed.

- c. Proposed measures to reduce or control aesthetic impacts, if any: [\[help\]](#)

No measures are proposed to reduce or control aesthetic impacts.

11. Light and glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur? [\[help\]](#)

No glare is anticipated.

- b. Could light or glare from the finished project be a safety hazard or interfere with views? [\[help\]](#)

No safety hazards are anticipated.

- c. What existing off-site sources of light or glare may affect your proposal? [\[help\]](#)

No existing off-site sources of light or glare are anticipated that would affect this proposal.

- d. Proposed measures to reduce or control light and glare impacts, if any: [\[help\]](#)

No measures to reduce or control light and glare impacts are proposed.

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity? [\[help\]](#)

Hiking, fishing, boating, and other types of recreational activities are all popular.

- b. Would the proposed project displace any existing recreational uses? If so, describe. [\[help\]](#)

No this project will not displace any existing recreational use.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: [\[help\]](#)

No measures are proposed to reduce or control impacts on recreation.

13. Historic and cultural preservation

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe. [\[help\]](#)

A review of the database maintained by the Washington State Department of Archaeology and Historic Preservation (DAHP) shows no buildings, structures, or sites recorded in or near the project.

- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. [\[help\]](#)

A review of the database maintained by DAHP and available historic maps show no landmarks, features or other evidence of Indian or historic use or occupation known at this time. As part of WDFW's planning process a cultural review of the project will be completed. The review will include consultation with affected tribes and DAHP.

- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. [\[help\]](#)

A determination of the probability for cultural resources to be located within the project area was performed based largely upon review and analysis of past environmental and cultural contexts and previous cultural resource studies and sites and tribal consultation. Research to be conducted for this assessment includes review of environmental and cultural contexts from a variety of sources including the Washington State Department of Archaeology and Historic Preservation (DAHP), Washington Information System for Architectural and Archaeological Records Data (WISAARD), Bureau of Land Management's General Land Office (GLO) Survey Records database, HistoryLink, Historic Map Works, University of Washington's Digital Collection, and Washington State University's Early Washington Maps Collection. Consultation with interested tribes and field review will be initiated upon request from the Army Corps of Engineers.

- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

Cultural review of the project and the results of consultation would inform final project design. In the event that the project encounters archaeological deposits or features, WDFW's Inadvertent Discovery Plan should be enacted. Contractors and WDFW staff will be briefed on the plan prior to project initiation.

14. Transportation

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. [\[help\]](#)

The project is in Clark County. Access to the site is gained by Interstate 5, WA-503, North Pacific Highway and NW Hayes road, and then to 15th Avenue. Please refer to page 1 of site plans for more information.

- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop? [\[help\]](#)

The nearest public transit access site is unknown.

- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? [\[help\]](#)

There will be no designated parking spaces at project completion.

- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). [\[help\]](#)

Staff will access the site by an unpaved dirt road. No new paved roads are anticipated.

- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. [\[help\]](#)

The project does not occur in the immediate vicinity of water, rail or air transportation.

- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? [\[help\]](#)

Highest period of use will be from WDFW staff during seasonal salmon spawning and rearing activities, typically in the fall or early winter. WDFW Staff will travel (typically by pickup trucks) to the completed project for monitoring and data collection activities.

- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

This project is on private property with limited public access. No interference with the movement of agricultural or forest products on roads or streets in the area is anticipated.

- h. Proposed measures to reduce or control transportation impacts, if any: [\[help\]](#)

No measures are proposed.

15. Public services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. [\[help\]](#)

The proposed project will not result in an increased need for public services.

- b. Proposed measures to reduce or control direct impacts on public services, if any. [\[help\]](#)

No measures are proposed.

16. Utilities

- a. Circle utilities currently available at the site: [\[help\]](#)
Electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _____

No utilities are available at the site.

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. [\[help\]](#)

No utilities are proposed for the project.

C. Signature [\[HELP\]](#)

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Cynthia Knudsen

Name of signee Cynthia Knudsen

Position and Agency/Organization KIDFW - BIOLOGIST

Date Submitted: 4/8/15